

ABSTRACT

Control system and method for controlling a part of the vehicle in which sensor systems are mounted at different locations on the vehicle, each sensor system providing a measurement related to a state of the sensor system or a measurement related to a state of the mounting location. A processor coupled to the sensor systems diagnoses the state of the vehicle based on the measurements of the sensor system, e.g., by the application of a pattern recognition technique. The processor controls the part based at least in part on the diagnosed state of the vehicle. At least one of the sensor systems may be a high dynamic range accelerometer or a sensor selected from a group consisting of a single axis acceleration sensor, a double axis acceleration sensor, a triaxial acceleration sensor and a gyroscope, and may optionally include an RFID response unit.